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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/295,957	04/21/1999	K. MANI CHANDY	06618/303001	7789

20985 7590 01/20/2004

FISH & RICHARDSON, PC
12390 EL CAMINO REAL
SAN DIEGO, CA 92130-2081

EXAMINER

TRUONG, LECHI

ART UNIT	PAPER NUMBER
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2126

DATE MAILED: 01/20/2004

18

Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary

Application N .

09/295,957

Applicant(s)

CHANDY ET AL.

Examiner

LeChi Truong

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2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on April 21 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office Action is in response to amendment C (RCE) filed November 22, 2003.

Claims 1-6 are presented for examination.

Claim Rejections - 35 USC § 103

2. Claims **1-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Damani et al US. Patent 5,938,775)

3. **As to claim 1**, Damani teaches the invention substantially as claimed including plurality process objects (processes, col 5, ln 1-67), inbox (outgoing message, col 2, ln 10-45), messages (message, col 2, ln 10-45), another process object (between processes, col 17, ln 43-67), outbox (outgoing message, col 2, ln 10-45), freeze method (checkpoint, col 2, ln 10-45/ col 1, ln 24-35/ col 18, ln 25-40), saves the state of the process object to persistent storage (saves its state to on stable storage, col 1, ln 24-35/ col 2, ln 10-45), thaw method (a log based recovery, col 5, ln 3-17), restores the frozen process object to persistent storage (reconstruct as much as process state as possible, col 5,ln 3- 17), interconnecting (interconnected , col 2, ln 10-45/ col 17, ln 40-67/ col 5, ln 1-40), personal network (communication network 56, col 5, ln 10-52), passing messages between the inter-connected (inter-node communication, col 5, ln 1-40). Damani does not explicit teach the term “ a frozen process object which does not use operating system resource. However Damani teaches the fault tolerant library functions of the software code associated with respective application process provide a checkpoint function (col 4, ln 15-60/ Fig. 1). It would have been obvious to apply the teaching of Damani in order to reduce the

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amount of lost work due to failures in long-running scientific applications or to enable fast and localized recovery in continuously running service providing applications.

4. **As to claim 2**, Damani teaches mail daemon object (the receiver log file 90, col 6, ln 1-23), message (message, col 6, ln 1-23).

5. **As to claim 3**, Damani teaches summoning response method, for instantiating the process object (a logging process notification, col 7, ln 35-67).

6. **As to claim 4**, Damani teaches the summoning response method cause the thaw method of the process object to be invoked (sending additional message to force the logging process at P0, P1, P3, col 7, ln 35-60).

7. **As to claim 5**, Damani teach a snapshot variable (the watchdog/ fault-tolerant process list 25, col 5, ln 20-67), process object has record its state (maintains the plurality of rows each associated with a monitored application process, col 5, ln 25-67).

Allowable Subject Matter

8. Claims 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (703) 305 5312. The examiner can normally be reached on 8 - 5.

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The fax phone numbers for the organization where this application or proceeding is assigned are 5T 01 for regular communications and none for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 9000.

LeChi Truong
January 12, 2004


MENG-AL T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100